

# High Content 2021

8<sup>th</sup> Annual Conference of The Society of Biomolecular Imaging and Informatics

## Program Agenda

17 Sept 2021





### To Register

#### Monday, October 4, 2021

All times US Eastern

11:00 a.m. – 2:00 p.m. **Exhibit Hall open**

11:00 a.m. – 2:00 p.m. **Education Course Day**

|                         | <i>Track 1</i>   | <i>Track 2</i>  |
|-------------------------|--|---|
| 11:00 a.m. – 12:00 p.m. | <b>Intro to 3D assays: plate setup through analysis</b> —Özlem Yavas Grining (InSphero)<br><br>Sponsored by<br>              | <b>Introduction to high-content image analysis</b> —Kayla Hill (Molecular Devices)<br><br>Sponsored by<br> |
| 12:00 – 1:00 p.m.       | <b>Metrics and best practices for assay development and standardization</b> —Joe Trask (PerkinElmer)<br><br>Sponsored by<br> | <b>Introduction to AI / deep learning</b> —Alice Lucas (Broad Institute)<br><br>Sponsored by<br>           |
| 1:00 – 2:00 p.m.        | <b>3D best practices</b> —Jonny Sexton (University of Michigan)<br><br>Sponsored by<br><br>YOKOGAWA ◆  | <b>Introduction to assay statistics</b> —Bartek Rajwa (Purdue University)   |

**Tuesday, October 5, 2021**

All times US Eastern

9:00 a.m. – 5:00 p.m.

**Exhibit Hall open / Digital networking**

9:00 – 11:00 a.m.

**Poster session with live chat and video (1)**

10:00 – 11:00 a.m.

**Roundtable**

**Cloud-optimized data management and analysis for high-content screening**

Sponsored by  **Glencoe**  
SOFTWARE

11:00 a.m. – 12:00 p.m.

**Keynote presentation**

**Toward intelligent microscopes: deep learning's potential for biomedical imaging applications**—Aydogan Ozcan (University of California, Los Angeles)

12:15 – 2:15 p.m.

**Session I — How does high-content intersect with single-cell analysis and/or spatial omics?**

Chair: Greg Way (Broad Institute)

12:15 – 12:40 p.m.

**Life beyond the pixels: single-cell analysis using deep learning and image analysis methods**—Peter Horvath (FIMM, Szeged University)

12:40 – 1:05 p.m.

**Expansion-assisted iterative FISH (EASI-FISH): spatio-molecular profiling in thick tissue**—Yuhan Wang (Janelia Research Campus)

1:05 – 1:30 p.m.

**Spatiotemporal dissection of the human proteome**—Emma Lundberg (KTH Royal Institute of Technology)

1:30 – 1:55 p.m.

**Mapping the temporal and spatial dynamics of the human endometrium in vivo and in vitro**—Roser Vento-Tormo (Wellcome Sanger Institute)

1:55 – 2:15 p.m.

**Q & A**

- 2:30 – 4:30 p.m. **Session II — 3D biology: instrument platforms, consumables, software, and models**  
Chair: Karen Dowell (Akoya Biosciences)
- 2:30 – 2:55 p.m. **Primary human liver cell spheroids as a platform for evaluating liver toxicity and potency of per- and polyfluoroalkyl substances (PFAS)**—Ella Atlas (HealthCanada)
- 2:55 – 3:20 p.m. **The development and utility of physiologically relevant models in drug discovery**—Madhu Lal-Nag (Research Governance Council, FDA)
- 3:20 – 3:45 p.m. **Redefining patient-relevant 3D in vitro models**—Nataliia Beztsinna (Crown Bioscience)
- 3:45 – 4:10 p.m. **From works of art to a scalable industry**—Patrick Guye (Trillium)
- 4:10 – 4:30 p.m. Q & A

4:30 – 5:30 p.m.

**Roundtable**

**The current landscape of oncological testing using high-content technology**

Sponsored by



**Educational session**

**In situ techniques for high-content analysis**—Jeffrey Moffit (Boston Children’s Hospital / Harvard Medical School)

4:30 – 6:00 p.m.

**Poster session with live chat and video (2)**

**Wednesday, October 6, 2021**

All times US Eastern

9:00 a.m. – 5:00 p.m.

**Exhibit Hall open / Digital networking**

9:00 – 11:00 a.m.

**Poster session with live chat and video (3)**

10:00 – 11:00 a.m.

**Roundtable**

**AI and automation of high-content screening analysis**



|                         |   |
|-------------------------|---|
| 11:00 a.m. – 12:00 p.m. | <b>Keynote presentation</b><br><b>Co-evolving AI and pathology to target cancer evolution</b> —Yinyin Yuan (The Institute of Cancer Research, London)   |
| 12:15 – 2:15 p.m.       | <b>Session III — Infectious disease: SARS-CoV-2 and beyond</b><br>Chair: Spencer Shorte (Institut Pasteur / Institut Pasteur Korea)   |
| 12:15 – 12:40 p.m.      | <b>SARS-CoV-2 biology and drug development</b> —Seungtaek Kim (Institut Pasteur Korea)  |
| 12:40 – 1:05 p.m.       | <b>Deep-learning enabled phenomics applied to COVID-19 drug discovery</b> —Katie Heiser (Recursion Pharmaceuticals)   |
| 1:05 – 1:30 p.m.        | <b>Compound repurposing by target based and phenotypic approaches to identify in vitro inhibitors of SARS-CoV-2 viral entry and replication</b> —Philip Gribbon (European ScreeningPort, Fraunhofer ITMP) |
| 1:30 – 1:55 p.m.        | <b>High-content screening for the serology and treatment of SARS-CoV-2 infection</b> —Vilja Pietiäinen (FIMM, University of Helsinki)   |
| 1:55 – 2:15 p.m.        | <b>Q &amp; A</b>  |
| 2:30 – 4:30 p.m.        | <b>Session IV — Functional genomics and imaging: genotype to phenotype</b><br>Chair: Heba Sailem (University of Oxford)   |
| 2:30 – 2:55 p.m.        | <b>Genome-wide optical pooled screens and analysis of high-content genomic screening data</b> —Paul Blainey (MIT / Broad Institute)   |
| 2:55 – 3:20 p.m.        | <b>Arrayed functional genomics screens for identification and validation of drug targets</b> —Jenna Bradley (AstraZeneca)   |
| 3:20 – 3:45 p.m.        | <b>An update on the JUMP–CP Consortium: insights from pilot experiments and outlook</b> —Paula Andrea Marin Zapata (Bayer AG)   |
| 3:45 – 4:10 p.m.        | <b>President's Innovation Award Guest Speaker</b>   |
| 4:10 – 4:30 p.m.        | <b>Q &amp; A</b>  |

4:30 – 5:30 p.m.

**Roundtable**

**How to choose and insert the right reporter protein for your project**

Sponsored by



**Educational session**

**AI for image enhancement**—Uri Manor (Salk Institute for Biological Studies)

4:30 – 6:00 p.m.

**Poster session with live chat and video (4)**

5:30 p.m.

**Award Ceremony (Poster Hall) and Annual General Meeting**